

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A document structure inspection method comprising the step of:

applying a document structure alteration rule, which is stored by storage means, to a first document structure definition written in a document structure definition language to express the structure of a structured document for the purpose of effecting conversion to generate a second document structure definition;

wherein said document structure alteration rule includes a replacement rule for setting an element name of a document structure definition ~~element name that is to be replaced~~ to replace therewith corresponding to ~~in accordance with~~ an element name of ~~contained in~~ a document structure definition targeted for application and ~~[[/or]]~~ an addition rule for setting an element name of a document structure definition ~~element name that is to be added~~ corresponding to an element name contained in a document structure definition targeted for application, wherein said conversion creates said second document structure definition by replacing an a-specified element appearing in said first document structure definition and specified by the element name of a document structure definition targeted for application, which is set in said replacement rule, with a [[an]] corresponding element specified by the element name of a document structure definition to replace therewith, which is set in said replacement rule, ~~set in a document structure definition stored in said storage means when an element name targeted for application, which is set in said replacement rule, appears in said first document structure definition and~~ ~~[[/or]]~~ by adding an element specified by the element name of a document structure definition that is to be added, which is set in said addition rule, set in the document structure definition, which is stored in said storage means, at a predetermined location specified by the ~~corresponding to a specified element~~

~~when an element name targeted for application, which is set in said addition rule, appears~~
appearing in said first document structure definition; and

conducting an inspection on an individual element name basis to determine whether a
structured document which was produced through a document processing from another
structured document is consistent by definition with said second document structure definition
generated by applying said document structure alteration rule to said first document structure
definition is consistent with a corresponding structured document.

2. (Original) The document structure inspection method according to claim 1,
wherein said replacement rule is applied to an element of said first document structure definition
corresponding to an encrypted portion of said structured document for the purpose of effecting
conversion to generate a corresponding document structure definition element.

3. (Previously Presented) The document structure inspection method according to
claim 1, wherein the element added by applying said addition rule is an element that corresponds
to a digital signature affixed to said structured document.

4. (Previously Presented) The document structure inspection method according to
claim 1, wherein said first document structure definition corresponds to the structure definition
of an electronically signed document, and wherein the element added by applying said addition
rule is a structure definition element of a document targeted for a digital signature.

5. (Cancelled)

6. (Original) The document structure inspection method according to claim 1, wherein the name of said document structure definition has an extension indicating the type of document structure definition language in which said document structure definition is written, and wherein a step for said inspection is performed in accordance with said document structure definition language indicated by said extension.

7. (Currently Amended) A document structure inspection apparatus, comprising:
a document structure definition converter for applying a document structure alteration rule stored by storage means to a first document structure definition written in a document structure definition language to express the structure of a structured document, for the purpose of effecting conversion to generate a second document structure definition; and

a document structure inspection unit for conducting an inspection on an individual element name basis to determine whether a structured document which was produced through a document processing from another structured document is consistent by definition with said second document structure definition generated by applying said document structure alteration rule to said first document structure definition ~~is consistent with a corresponding structured document;~~

wherein said document structure alteration rule includes a replacement rule, which sets an element name of a document structure definition ~~element name that is to be replaced~~ to replace therewith corresponding to ~~in accordance with~~ an element name of ~~contained in~~ a document structure definition targeted for application, and ~~[[/or]]~~ an addition rule, which sets an element

name of a document structure definition ~~element name~~ that is to be added corresponding to an element name contained in a document structure definition targeted for application; and

wherein said document structure definition converter comprises means for replacing an a specified element appearing in said first document structure definition and specified by the element name of a document structure definition targeted for application, which is set in said replacement rule, by a [[an]] corresponding element specified by the element name of a document structure definition to replace therewith, which is set in said replacement rule, set in a document structure definition stored in said storage means when an element name targeted for application, which is set in said replacement rule, appears in said first document structure definition, and~~[[/or]]~~ means for adding an element specified by the element name of a document structure definition that is to be added, which is set in said addition rule, set in the document structure definition stored in said storage means at a predetermined location specified by the corresponding to a specified element when an element name targeted for application, which is set in said addition rule, appears appearing in said first document structure definition.

8. (Original) The document structure inspection apparatus according to claim 7, wherein said document structure definition converter applies said replacement rule to an element of said first document structure definition, which corresponds to an encrypted portion of said structured document, in order to effect conversion to generate a corresponding document structure definition element.

9. (Previously Presented) The document structure inspection apparatus according to claim 7, wherein the element added by applying said addition rule is an element that corresponds to a digital signature affixed to said structured document.

10. (Previously Presented) The document structure inspection apparatus according to claim 7, wherein said first document structure definition corresponds to the structure definition of an electronically signed document, and wherein the element added by applying said addition rule is a structure definition element of a document targeted for a digital signature.

11. (Cancelled).

12. (Original) The document structure inspection apparatus according to claim 7, wherein the name of said document structure definition has an extension indicating the type of document structure definition language in which said document structure definition is written, and wherein said document structure inspection unit conducts an inspection in accordance with said document structure definition language indicated by said extension.

13. (Currently Amended) A program for causing a computer to implement a conversion function for applying a document structure alteration rule stored by storage means to a first document structure definition written in a document structure definition language to express the structure of a structured document, for the purpose of effecting conversion to generate a second document structure definition, and an inspection function for conducting an inspection on an individual element name basis to determine whether a structured document

which was produced through a document processing from another structured document is consistent by definition with said second document structure definition generated by applying said document structure alteration rule to said first document structure definition is consistent with a corresponding structured document;

wherein said document structure alteration rule includes a replacement rule, which sets an element name of a document structure definition ~~element name that is to be replaced~~ to replace therewith corresponding to ~~in accordance with~~ an element name of ~~contained in~~ a document structure definition targeted for application, and ~~[[/or]]~~ an addition rule, which sets an element name of a document structure definition ~~element name~~ that is to be added corresponding to an element name contained in a document structure definition targeted for application; and

wherein said conversion function includes a function for replacing an a-specified element appearing in said first document structure definition and specified by the element name of a document structure definition targeted for application, which is set in said replacement rule, by a [[an]] corresponding element specified by the element name of a document structure definition to replace therewith, which is set in said replacement rule, set in a document structure definition stored in said storage means when an element name targeted for application, which is set in said replacement rule, appears in said first document structure definition and ~~[[/or]]~~ a function for adding an element specified by the element name of a document structure definition that is to be added, which is set in said addition rule, at a predetermined location specified by the ~~corresponding to a specified element wne~~ an element name targeted for application, which is set in said addition rule, appeared appearing in said first document structure definition.

14. (Cancelled).

15. (Previously Presented) The document structure inspection method according to claim 1, wherein the document structure alteration rule includes a relevant document structure definition, and the conversion step incorporates the relevant document structure definition corresponding to the specified element into said second document structure definition when applying the document structure alteration rule.

16. (Currently Amended) A document structure inspection method comprising the steps of:

conducting a first inspection on an individual element name basis to determine whether a structured document is consistent with a corresponding first document structure definition written in a document structure definition language;

in the case that an inconsistency occurs during the first inspection, suspending the first inspection and searching a document structure alteration rule library that is a collection of a plurality of document structure alteration rules for an applicable document structure alteration rule based on an inconsistent element name that appears in the structured document;

wherein said document structure alteration rule sets a name of a second document structure definition to replace therewith and a name of a second document structure definition that is to be added, corresponding to the inconsistent element name;

conducting a second inspection on an individual element name basis by use of a second document structure definition corresponding to the inconsistent element name in a document structure alteration rule found through the search; and

when the second inspection has reached the end of the second document structure definition, resuming the first inspection from the inconsistent element or an inspection position

next to the inconsistent element a point to return of the first document structure definition,
depending on whether the used second document structure definition is one to be added or one to
replace therewith, respectively.

17. (New) A document structure inspection apparatus, comprising:

means for conducting a first inspection on an individual element name basis to determine whether a structured document is consistent with a corresponding first document structure definition written in a document structure definition language;

means for suspending the first inspection, in the case that an inconsistency occurs during the first inspection, and searching a document structure alteration rule library that is a collection of a plurality of document structure alteration rules for an applicable document structure alteration rule based on an inconsistent element name that appears in the structured document;

wherein said document structure alteration rule sets a name of a second document structure definition to replace therewith and a name of a second document structure definition that is to be added, corresponding to the inconsistent element name;

means for conducting a second inspection on an individual element name basis by use of a second document structure definition corresponding to the inconsistent element name in a document structure alteration rule found through the search; and

means for resuming the first inspection, when the second inspection has reached the end of the second document structure definition, from the inconsistent element or an inspection position next to the inconsistent element of the first document structure definition, depending on whether the used second document structure definition is one to be added or one to replace therewith, respectively.

18. (New) A program for causing a computer to implement the functions of:

conducting a first inspection on an individual element name basis to determine whether a structured document is consistent with a corresponding first document structure definition written in a document structure definition language;

in the case that an inconsistency occurs during the first inspection, suspending the first inspection and searching a document structure alteration rule library that is a collection of a plurality of document structure alteration rules for an applicable document structure alteration rule based on an inconsistent element name that appears in the structured document;

wherein said document structure alteration rule sets a name of a second document structure definition to replace therewith and a name of a second document structure definition that is to be added, corresponding to the inconsistent element name;

conducting a second inspection on an individual element name basis by use of a second document structure definition corresponding to the inconsistent element name in a document structure alteration rule found through the search; and

when the second inspection has reached the end of the second document structure definition, resuming the first inspection from the inconsistent element or an inspection position next to the inconsistent element of the first document structure definition, depending on whether the used second document structure definition is one to be added or one to replace therewith, respectively.

19. (New) The document structure inspection method according to claim 1, wherein said replacement rule includes a location specified by the element name of the document

structure definition to be replaced in the first document structure definition, and said addition rule includes a location indicated by the element name in the first document structure definition at which a new document structure definition is to be added.

20. (New) The document structure inspection apparatus according to claim 7, wherein the document structure alteration rule includes a relevant document structure definition, and the document structure definition converter incorporates the relevant document structure definition corresponding to the specified element into said second document structure definition when applying the document structure alteration rule.

21. (New) The program according to claim 13, wherein the document structure alteration rule includes a relevant document structure definition, and the conversion function incorporates the relevant document structure definition corresponding to the specified element into said second document structure definition when applying the document structure alteration rule.